

Serial No. 10/613,057
Attorney Docket No. BFGRP0304US

Reply to Office Action Dated December 2, 2004
Reply Dated January 31, 2005

REMARKS

Following entry of the above amendment, claims 1-3, 5-8 and 10-18 will be pending. Claims 1 and 17 have been amended herein to incorporate the features of dependent claims 9 and 19, respectively, now canceled.

Applicant wishes to thank the Examiner for the continued careful examination of the application.

I. REJECTION OF CLAIMS 1-20 UNDER 35 U.S.C. § 103(a)

Claims 1-20 now stand rejected under 35 U.S.C. § 103(a) based on Rudd '676 in view of Murphy. Withdrawal of the rejection is respectfully requested for at least the following reasons.

Claims 1 and 17 have been amended herein to emphasize the brake-gain nature of the present invention. Specifically, claims 1 and 17 recite how the brake controller receives as inputs *both* the torque applied to the wheel and the brake pressure applied to the wheel. Using both the measured brake torque and measured brake pressure, an accurate inverse brake gain may be calculated and is utilized to adjust the brake pressure output command as recited in claims 1 and 17. As is discussed in the present application, the measured brake gain overcomes conventional approaches in which torque feedback alone was utilized.

Rudd '676 describes an antiskid control system which utilizes brake torque feedback. As is described in Rudd '676, a torque sensor provides a brake torque feedback signal which is provided to a Kalman filter based controller. As is described in Rudd '676 in relation to Equation 6 noted by the Examiner, Rudd '676 relies on the Kalman filter to estimate brake gain based on the measured torque. While there is apparent beauty in the manner in which Rudd '676 utilizes a state estimator, applicant's invention provides beauty in its simplicity.

More specifically, Rudd '676 does not teach or suggest a controller which calculates inverse brake gain utilizing the measure brake torque and measured brake pressure as recited in claims 1-17. Nor does Rudd '676 teach or suggest the desirability of such an approach.

Murphy does not make up for the deficiencies in Rudd '676. Murphy admittedly teaches a brake controller which utilizes both measured brake torque and measured brake pressure. (See, e.g., Fig. 3). However, Murphy does not calculate and utilize the inverse brake gain as recited in

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claims 1 and 17. Rather, Murphy teaches using the measured brake torque and measured brake pressure to transition between open loop torque control and closed loop pressure control. (See, e.g., Col. 8, lns. 35-49).

Accordingly, withdrawal of the rejection of claims 1 and 17, together with the claims dependent therefrom, is respectfully requested.

II. CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present invention.

Any fee(s) resulting from this communication is hereby authorized to be charged to our Deposit Account No. 18-0988; Our Order No. BFGRP0304US).

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP


Mark D. Saralino, Reg. No. 34,234

1621 Euclid Avenue, 19th Floor
Cleveland, Ohio 44115-2191
Telephone: (216) 621-1113
Facsimile: (216) 621-6165

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